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Baker

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July 3, 1995

Commander
Atlantic Division
Naval Facilities Engineering Command
1510 Gilbert Street (Building N-26)
Norfolk, Virginia 23511-2699

Attn: Mr. Art Wells
Navy Technical Representative
Code 1823

Re: Contract N62470-89-D-4814
Navy Clean, District III
Contract Task Order (CTO) 0223
RFI Project Plans for Roosevelt Roads
Discussion of Agency Comments

Dear Mr. Wells:

Baker environmental, Inc. (Baker) has reviewed the comments from the EPA and their contractor. They generally fall into two categories:

1. Comments pointing out discrepancies in the text or relatively minor changes in language and

2. Comments representing significant changes in approach that will impact both schedule and budget.

It is the intent of this letter to identify and briefly discuss the second type of comment.

Four separate sets of comments were provided in the single document. These are:

- Tim Gordon's general comments (given letter designations on the attached copy for ease of reference).
- Enclosure 2 (which has a numbering system).
- General comments from TRCs review document -- Enclosure 1 (lettered for reference) and
- Detailed comments which start on page 6 of Enclosure 1 (numbered for reference).

Each of these sets is discussed separately.

SET 1 - TIM GORDON'S LETTER

In general, the comments within the letter repeat the summary comments in the TRC review.

Comment A

The intent is to do full Appendix IX at the areas where specified in the text. Some of this comment is based upon a table which requires updating. This issue can be addressed on a SWMU by SWMU basis; however, the cost of the overall program will increase.

Comment B

Baker does not recall discussing explosives or asbestos analyses at the meeting in January. It is likely that the EPA will not back away from this requirement and we will probably have to perform the analytics at least on some of the samples from SWMUs 1, 2, and 3. The exact number should be discussed. Any analyses of this type will increase overall project costs.

Comment C

Additional subsurface samples will definitely increase cost. No number (other than more than one) is mandated so we are free to propose a plan. It is unlikely that the EPA will alter their stance on this issue.

Comment D

Background sampling locations will be reviewed.

Comment E

The data validation issue should be a minor one. The intent has always been to properly validate, therefore, project costs should not be impacted.

Comment F

The problem with numbers of samples will be corrected.

Comment G

The "data gaps/deficiencies" were either addressed to the extent possible or sufficient information to address them does not exist. Records will be reviewed to see if additional information, especially regarding sample depths and locations, can be gleaned. If material is unavailable, we will have to work with what we have and clearly explain that the requested information is not available. The "depth" of surface soil and sediment sampling is not known.

Comment H

See discussion of Comment G.

Comment I

Baker does not remember discussing the full abandonment of Confirmation Study data at the January meeting. It still seems that the data has value for comparison purposes especially if the results of the RFI investigations show comparable concentrations. Removing the information from the workplan should not be difficult should it be decided that it is the proper course to follow.

SET 2 - ENCLOSURE 2

Comment 1

The text can be altered to include a discussion of sampling in the monitoring well boring.

The area around Building 145 is flat with no slope present on either side. The interior of the building slopes downward from each end through apparent excavation prior to installation/construction. It is at the low point where our sampling is proposed in order to detect possible releases at their most likely point. This approach still seems technically adequate.

Comment 2

Three samples for arsenic only can be added as per the comment. The table will be emended appropriately.

Comment 3

The possible array of sampling points will be added to the figure.

Comment 4

Additional samples (up to ten as requested) can be included if desired. Costs will be increased.

The stained area is not evident at the site. Baker does not have the 1988 photographs to review for determination of stain location.

Comment 5

The exact location of the area denoted in the 1988 RFA is known and is as shown on the drawing. The materials were pushed to the point shown. The expansion of the soil gas work seems unwarranted.

Comment 6

Task 4-2 will be altered to include the sampling program as described in the text. Likewise, the figure will be corrected.

Baker does not have the site characterization report for this area and it may be useful for information and to locate monitoring wells, etc.

Comment 7

The changes contained in the comment do not appear excessive or unwarranted; however, some cost impact will occur.

The inconsistencies between text, figures and tables will be rectified.

Comment 8

The changes indicated in the comment do not seem unreasonable. Discrepancies between text, figures, and tables will be rectified.

Comment 9

A map as described in the comment will be prepared if possible.

Comment 10

The table will be revised accordingly.

Comment 11

There are no new wells proposed (if we can find the old wells they will be rehabilitated); therefore, no borings may be necessary. If borings for sampling are required, the need to analyze (assume for appendix IX constituents) continuous samples will be extremely costly. In addition, we may as well install new wells if the borings have to be made regardless. This would ensure the integrity of the installation.

Comment 12

Discrepancies between the text, tables and figure will be corrected.

See the response to Comment 11 regarding the cost of continuous sampling which also applies here.

Comment 13

Task 4-2 will be changed to reflect the sampling program discussed in the text.

Comment 14

The table will be revised to agree with the final text.

Baker will require the Blasland, Bouck and Lee report to assess the extent to which it addresses permit requirements.

The need for borings regardless of whether pits are found is not unreasonable. The comment does not specify sampling intervals or analytical methods. Continuous sampling and Appendix IX analyses would be extremely costly.

Comment 15

Continuous sampling and analysis is very expensive. Some middle ground between continuous and one sample should be sought with EPA.

Comment 16

The changes indicated in the comment will be made.

SET 3 - ENCLOSURE 1 GENERAL COMMENTS

Comment A

Very similar to Tim Gordon's first comment. A table as described in the permit can be prepared.

Comment B

As indicated earlier, Baker has no recollection of the asbestos and explosives discussion. These parameters can be added if desired for SWMUs 1, 2, and 3; however, a significant increase in cost will be experienced.

Comment C

A list of constituents for analysis will be provided in the workplan.

Comment D

The problems stated with the analytical method are documented in the literature. It is recognized that 418.1 is more of a screening tool selected for its relatively low cost. Change to other, more rigorous, analytical methods will increase costs significantly. Given the apparent weight the EPA gives to this issue in the comments, it is unlikely that Method 418.1 will be acceptable.

Comment E

Refer to response to Set 1 Comment C (from Tim Gordon's letter).

Comment F

Refer to response to Set 1 - Comment D (from Tim Gordon's letter).

Comment G

Refer to response to Set 1 - Comment E (from Tim Gordon's letter).

Comment H

Refer to response to Set 1 - Comment F.

Comment I

Refer to response to Set 1 - Comment G.

Comment J and K

Refer to responses to Set 1 - Comments H and I.

SET 4 - ENCLOSURE 1 SPECIFIC, SWMU BY SWMU COMMENTS

Comment 1

The material requested is being gathered for presentation here as much as the database allows. Whatever is found/recreated will be depicted and described as appropriate.

Comment 2

The reference to adequate sediment characterization will be deleted. The comment does not specify that surface water sampling is necessary and, based on tidal flux, etc., appears unwarranted.

Comment 3

Due to tidal flux and currents, the need for surface water characterization is weak. The EPA should provide some technical justification for surface water sampling other than just "...does not comply with the RCRA Corrective Measures Permit..."

Comment 4

Three samples per boring are requested; however, it is quite possible that no or minimal borings will be done since we will try to rehabilitate existing wells. The requirement here is certainly less onerous than Tim Gordon's (Comment 11), which indicated continuous sampling and analysis was necessary.

Additional surface soil sample locations are requested. This is probably not unreasonable and was expected given the size of the area and the wastes disposed. No quantification of a "...more extensive sampling." is provided.

The final point raised is again the issue of asbestos and explosives analyses.

Comment 5

The locations of preferential waste disposal areas are being added to the figure in as much detail as the available information allows.

Comment 6

The samples and results obtained during the Construction Study can be removed; however, replacing the points with new samples will certainly increase costs.

Inspection of the shore for seeps, while apparently an easy and quick task, will be most difficult considering the twisted web of mangroves and jungle, which characterizes the shore. Attempts can be made but with difficulty. Sampling language can be altered.

If distressed vegetation or areas of apparently absent vegetation, a sediment sample can be obtained there to ascertain if the problem is related to sediment contamination.

Comment requests asbestos, explosives and TOC analyses. Asbestos and explosives have been discussed elsewhere. The addition of TOC to all sediment samples is justified for the reasons indicated in the comment.

Comment 7

Essentially the same comments (and responses) to the discussion of SWMU 1. Additional information from the SI will be placed on the drawing. As possible, sample locations can be tailored to areas where specific waste was disposed.

The most significant portion of this comment in terms of cost is the need for subsurface samples.

Comment 8

Sediment discussion again. See response to Comment 2.

Comment 9

Surface water issue. See response to Comment 3.

Comment 10

The request for subsurface samples (three at each boring) is currently less than Tim Gordon's request for continuous sampling and analysis. Given the waste disposal history it is not unreasonable to obtain subsurface soil samples.

The need for additional surface soil sampling is not an arbitrary request given the size of the area; however, waste was buried (as per the previous comment rationale) which would apparently negate the need for an extensive surface soil sampling program. Perhaps a program of minimal extra samples taken based on the appearance of the surface would be acceptable. Counter to this is the presence of the jungle which limits accessibility for surface inspection.

The final issue in the comment relates to asbestos and explosives analyses. This has been discussed previously.

Comment 11

The EPA is requiring new sediment sampling at this SWMU since the confirmation study data is being disallowed. It is unlikely that they will change this requirement. Including sediment samples will obviously increase costs.

Again, they want inspection of the shore and selection of sediment samples based on seeps, etc. The access problem here is at least as severe as at SWMU 1.

The site referenced will be reviewed to determine appropriateness. TOC, explosives and asbestos analyses are requested. See previous discussions.

Comment 12

Attempts will be made to infer disposal areas for this SWMU and incorporate them into the figure as requested. Minor corrections in well locations may be required.

Comment 13

The reference to distressed vegetation comes from an inspection of some time ago and I do not believe it is still in evidence (can be checked during our site visit). If still visible or can be located, minimal additional samples can be obtained.

Same comment regarding asbestos, explosives and TOC. See previous comments.

Comment 14

Same comment for subsurface soils regarding asbestos, explosives and TOC. The comment indicates agreement with our approach.

Comment 15

Collection of sediment samples at leachate breakout points is commonly done. The number of these breakouts is expected to be minimal; therefore, cost for the investigation should not be greatly impacted.

Comment 16

Comment indicates agreement with the surface water, groundwater and sediment approach. Request is for expanded analysis to Appendix IX with explosive, asbestos and miscellaneous other items. There is probably no way of escaping these analytical requirements regardless of cost impact.

Comment 17

We can either include the referenced document, remove the reference to it or summarize the information and bring it into the workplan text. I believe that inclusion of the report is the path of least resistance.

Comment 18

This comment bears largely on the work of Blasland, Bouck and Lee which is being (or has been) revised. The workplan should reference the revised report which is assumed to have been issued to the EPA. Baker should also be provided the revised report so we can assess the validity of future EPA comments regarding it and the RFI workplan.

Comment 19

The comment discusses investigatory approach for the sludge pits at the Tow Way. Test pits are generally cost comparable to borings depending on a number of factors. Technically, test pits do provide the ability for examining a greater cross-section of soil and selecting more appropriate samples. There are also drawbacks to pitting. The location of underground utilities and pipelines must be quite exactly known so they can be avoided. A great deal more spoil is created which, if not allowed to be placed back in the pit, could represent expensive disposal. The depth of test pits is equipment capability limited and pits may have to be terminated prior to meeting termination criteria. While this is all true, the advantages of pits may, in this case, outweigh the disadvantages.

The comment indicates that one boring is "...grossly inadequate..." and that three-five borings or pits are required for each tank. Baker believes that two pits and one boring per tank may be appropriate. The boring could extend deeper than the pits or to the water table. The pits could flank the boring to provide better coverage. The locations of the pits and borings could be guided by GPR (which may also assist in identifying subsurface utilities). The collection of three samples for analyses in each pit and boring does not seem excessive nor does the requested list of analyses which is significantly reduced from Appendix IX.

The final part of the comment deals with the workplans intent to rely on the UST site characterization for groundwater information. This report is presently being reversed by Blasland,

Bouck and Lee and will be issued as Final to the EPA. Depending on the acceptance of the report, much of the groundwater characterization should be done.

Comment 20

Tank locations have been found on an old drawing. The approximate tank locations and SWMU extent will be indicated on the appropriate figure.

Comment 21

Oil and grease concentrations from Rounds 1 and 2 will be added to the plan. Since no quantifiable levels of contaminants can be ascribed to the shipping, the reference will be deleted. Appropriate regulatory levels will be cited if located.

Comment 22

The subject table will be revised to show the different rounds of sampling and proper reference to ESE.

Comment 23

Reference to Section 3.5 will be deleted.

Comment 24

The density of GPR lines will be provided in the text. The suggested 5 foot spacing is excessive; however, the cost of running GPR is in getting the unit mobilized and calibrated-adding traverse lines only increases costs incrementally.

Comment 25

The locations of the tanks will be shown on the appropriate figure.

The issue of borings vs. test pits is again raised.

TPH can be added to the analytical suite; however, there appears to be no technical rationale for full Appendix IX. Only fuels have been managed and this requirement was not made at SWMU 7.

Apparently, the requirement is being made for both 8015 and 8100 to replace 418.1. Baker is presently reviewing the various options in our chemistry group.

Comment 26

The boring locations shown are intended to show the approximate array. Actual boring locations will be selected in the field based on GPR results.

Comment 27

Additional rationale for well locations will be provided.

TPH analyses can be added; however, costs will be increased.

There is no technical justification for Appendix IX at this SWMU since all that was ever potentially released is petroleum fuel products.

Comment 28

There appears to be no technical justification for groundwater sampling at SWMUs 11 and 45 unless the results of the Interim Remedial Action indicate PCB contamination extended to the groundwater table. We should get the EPA to agree that groundwater sampling is contingent on IRA report results.

Comment 29

Wall and floor intersection samples can be obtained for a relatively small increase in cost. In addition, provisions for up to five more wipe samples from visibly stained or potential accumulation points will be included in the workplan.

Comment 30

The text will be altered to indicate that borings will be advanced to bedrock which is expected to be found at approximately 20 feet (Versar, 1992). This point should be below the bottom of the tanks.

Borings will be continuously sampled using Standard Penetration Testing Methods (split spoon) to establish stratigraphy and to identify possible zones of contamination. The near surface sample will be collected based on visual evidence of petroleum contamination, if present.

The area surrounding the tanks is extremely flat. Oceanic bodies of water lie not to far from the site on the southwest and northeast. For these reasons, groundwater downgradient is not known. The borings are located as proposed to provide the greatest chance for finding residual petroleum contamination related to the tanks.

The permit does call for groundwater investigations at the site. The comments do not request a monitoring program for the full SWMU but do indicate the need for wells at the tanks. This is not unreasonable and only represents a relatively minor increase in analytical costs.

All samples will be screened visually and with a PID/FID. Samples will be collected based on the results. This comment actually increases the number of samples from each boring from one to three.

The proposed 418.1 TPH method is again questioned.

The TRC review appears to indicate that they are not privy to the work being done under CTO-0296. The Navy should clarify with Tom Gordon exactly what is needed here. We may have to submit the 296 workplans/reports as an appendix to the RFI workplans.

Comment 31

The text will be updated with recently determined (from old drawings) flow directions.

This comment requests five additional sediment samples around the outfall. This number is probably too high but one is probably too low. May be able to compromise on three or four samples in a 50 foot fan pattern from outfall. TOC analyses can be added for a relatively nominal expense.

The recommended depth of 0-6 inches for sediment sampling will be adopted in the text.

Comment 32

The intake end of the tunnel presently has three samples proposed. The comment requests six samples. May be able to negotiate a somewhat smaller number. TOC analyses can be added for a relatively nominal expense.

Comment 33

This is a difficult comment to address. Outside of the Building 25 pad (and Building 145) we have no knowledge of where these other sites are. How can these be sampled without doing a large-scale sampling program sitewide? The EPA may buy a random grid approach or possibly some sampling to be based on a slam-bar or other soil gas methodology. In either case, costs for investigating this area will be significantly increased.

Baker does not know of any "asbestos sheeting" on the site. The site is now an equipment storage area for the Army Reserves. This may have to be explained to the EPA (they should know it based on Tim Gordon's visits and the 1993 TRC re-inspection) and a sampling strategy negotiated.

Comment 34

TPH can be added although, if the expanded protocols are desired, costs will increase; however, there are only three wells.

Comment 35

The suggested revisions will be reviewed by Baker's chemical personnel and a table of precision and accuracy goals for each analytical method will be indicated.

Comment 36

This comment is general and has been addressed on a SWMU specific basis.

Comment 37

The text will be revised to indicate that sediment samples will be collected at SWMUs 1, 2, 3, 11, and 45.

Comment 38

Additional soil and groundwater samples will be needed to establish "regional" background. This will increase costs somewhat in direct relation to the number of samples.

Comment 39

All applicable SOPs will be included in the DQAPP and will be appropriately referenced.

Comment 40

The indicated changes will be made in the next edition of the workplans.

Comment 41

Rising head slug tests (with a slug as described) will be employed.

Comment 42

The appropriate SOPs will be provided.

Comment 43

A discussion of GC calibration is provided on page 8-2 through 8-4 of Section 8.2.2.

Comment 44

The referenced SOP will be included.

Comment 45

The consistency of Appendix IX will be addressed. References to TCL and CLP will be removed.

Will provide a table showing analytical methods, detection limits and action levels. The additional analytical methods will be addressed.

Comment 46

The appropriate SOPs will be included.

Comment 47

The required data validation information will be included. This may require some preparation work by our data validation firm.

Comment 48

The unlabelled table will be entitled 11-1, QC Sample Frequency.

Comment 49

The rinsate analysis frequency (every other day) was taken from NEESA document 20.2-047B, Section 3.7, page 19. Additional QA samples (should we be forced to comply with EPA guidelines) will be reflected in increased costs.

The superscript on the table will be deleted.

Comment 49

The appropriate QA/QC samples for the proposed analytical methodologies will be discussed.

Comment 50

Surrogates, as appropriate to the GC methods, will be included in the workplan.

Comment 51

The control limits of the various samples are determined statistically by each laboratory based on an extensive period of performance. This comment will require Baker to select an analytical laboratory prior (in far advance) to the actual field work portion. While this is certainly possible, cost structure in the future could be more favorable to the navy (it could also be less favorable).

Comment 52

The statement which is the subject of this comment will be deleted from the text.

Comment 53

The techniques described in the comment are Baker's standard method of collecting samples. This will be clarified in the text.

Comment 54

This is an error in the equation. Page 5 (preceding the commented upon page) contains the appropriate reference to well radius. The equation will be corrected.

Comment 55

Our SOP indicates that field parameters will be measured until stable. A variance of less than 10 percent in measured values will be added to the SOP.

Comment 56

This will be discussed in the SOP. Essentially the same methodology and equipment is used.

Comment 57

Provisions for the use of detergent washes and hexane rinses, if heavy petroleum contamination is encountered, will be included in the document.

Comment 58

Data loggers and pressure transducers have been intended for use. This will be clarified in the workplan.

Comment 59

Baker intends to utilize the AQTESOLV program which employs the Bouwer and Rice and Cooper, et al., equations. Curves will be matched using best professional judgement. This will be described in the text.

Comment 60

The items requested are all commonly provided and represent standard industry practice. To provide exquisite detail, they will be described in the SOP.

Comment 61

Appropriate information will be placed on the drawing as available.

Comment 62

If available (which is unlikely) the location will be included on the drawing.

Comment 63

The table will be rectified with the permit.

Comment 64

The table will be revised to agree with text. Additions appropriate to Appendix IX will be made.

Comment 65

The table will be revised to include all parameters. Holding time requirements will be made consistent.

Comment 66

The geophysical report has been issued final and should not be revised. The comment agrees with the conclusions reached.

As you can see, there are a number of areas where decisions have to be made. Please call me at (412) 269-2065 to set up a time to meet (whether it be in person or over the phone) to resolve the issues once you have had an opportunity to review in detail the comments and our prospective responses.

Sincerely,

BAKER ENVIRONMENTAL, INC.

Thomas C. Fuller
Activity Coordinator

TCF/daf

cc: Ms. Madeline Rivera, NSRR